

Inputs for study on the solutions to promote digital education for young people and to ensure their protection from online threats.

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Title: The digital divide as a problem for young people, being different according to territory and gender. Proposals for improvement based on international data and regulations.

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1. Introduction

First, It is worth asking what the digital divide is, and we can offer the following definition: "the inequality that exists between different groups of the population in terms of access to, use and impact of new population in terms of access to, use and impact of new information and communication technologies (ICTs).¹ Based on the definition presented, we can speak of three types of digital divide: the access gap (the impossibility of some groups to access ICT), the use gap (due to the lack of digital skills) and the generational gap (the older population does not have received any type of training in digital skills nor have they had than to use them).²

Likewise, we must take into account that the area in which we live also affects us in terms of the digital divide, since rural areas have worse quality internet band, which is why we can highlight the data from Spain, 51% of the groups made vulnerable by insufficient digital skills are in rural areas in the EU, and 52%.³

¹ <https://www.becas-santander.com/es/blog/brecha-digital-que-es.html>

² RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII :“Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?” en Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

³ Competencias Digitales, Inclusión y Empleo Una visión desde Europa. Unidad de Capital Humano y Empleo Centro Común de Investigación, Sevilla, España, Comisión Europea. Clara Centeno. 5 Noviembre 2020.

In addition, it is important to highlight that women suffer a greater digital divide, due to gender stereotypes,⁴ resulting in very few women studying STEAM careers compared to men,⁵ using the Internet to a lesser extent and not knowing the different essential digital programs,⁶ and to suffer greater harassment on networks.⁷

2. Legal framework

The digital divide is intended to be eradicated through Digital Strategies both at the national, community and international level, We can mention at the level national Digital Spain 2025, at community level the Report on the closure of The digital gender gap: participation of women in the digital economy by the Commission on Women's Rights and Gender Equality in Parliament European in 2019 and at the international level the Report of the Secretary General of the United Nations on the Roadmap for digital cooperation of which, We have spoken, they are not legislative acts as such, but they do denounce the gap digital gender that current society suffers in all countries.⁸

However, in the technology sector we do find specific regulation in the processing of data as is Organic Law 3/2018, of December 5, of Protection of Personal Data and guarantee of digital rights at the level national, and at community level Parliament Regulation (EU) 2018/1725 European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the institutions, bodies and agencies of the Union, and to the free movement of those data.⁹

⁴ RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII: "Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?" en Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

⁵ Women in Digital Index 2021 European Commission, Eurostat.

⁶ RODRÍGUEZ MARTÍNEZ, Paloma; "Territorial and gender digital gap.". Congreso. Internacional. "Settle International Conference – Population Imbalances in Europe.". (27/04/2022 - 29/04/2022). <https://iaes.uah.es/es/transferecia-de-conocimiento/otras-actividades-de-transferecia/#settle-conference-posters>

⁷ Parlamento Europeo. INFORME - A9-0338/2021, con recomendaciones destinadas a la Comisión sobre la lucha contra la violencia de género: la ciberviolencia. 6-12-2021. https://www.europarl.europa.eu/doceo/document/A-9-2021-0338_ES.html

⁸ RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII: "Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?" en Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

⁹ RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII: "Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?" en Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

3.The state of the gender digital divide at international and EU level

In Spain, according to the WOMEN IN DIGITAL SCOREBOARD 2022 of the European Commission, the gap continues to be observed in terms of the use of the internet, digital skills, and people who specialize in STEM, both in studies and at work. In the European Union, the situation is similar that Spain in terms of percentages of men and women in the digital sector, with a much greater presence of men than women in STEM careers with only 14 women compared to 28 men graduating each 1,000, as well as the 19% wage gap in the European Union.¹⁰

On the other hand, the international situation does not improve the data provided, since in 2 out of 3 countries men use the web more than women, as stated in the Report of the Secretary General of the United Nations regarding the cooperation roadmap 2020 digital.

Also, it should be noted that 45% of women in the world do not have access to the internet, there are only 22% of women in artificial intelligence positions worldwide, and if the digital gender gap is not urgently addressed will expand, because in 2050, 75% of jobs will be related to STEM.¹¹

The gender and territorial digital divide has been analyzed by the United Nations in 2020, where they said in their report that the gender digital divide was increasing in rural areas.¹²

4. The causes of the gender digital divide

Briefly, the essential causes of the digital gender gap will be highlighted. Thus, the origin of the digital gender gap is gender stereotypes essentially, which leads to cyberbullying, sexual harassment, wage gap digital gender and the leaky pipe phenomenon, among many others consequences. Therefore, as just mentioned, gender stereotypes are the origin of this digital gender gap, where 3 factors intervene: sociocultural (socialization process and

¹⁰ WOMEN IN DIGITAL SCOREBOARD 2022 of the European Commission: <https://digital-strategy.ec.europa.eu/en/policies/desi>

¹¹ Data provided by UN Women, the ILO and the Economic Commission for Latin America and the Caribbean, on March 9, 2021.

¹² Informe del Secretario General de las Naciones Unidas. Hoja de ruta para la cooperación digital: aplicación de las recomendaciones del Panel de Alto Nivel sobre la Cooperación Digital. Asamblea General. A/74/821 del 29-5-2020 .

stereotypes), institutional (policies, legislation, organizational culture and unconscious biases) and psychosocial (self-confidence, technophobia, motivation, utility value).¹³

It is essential to eliminate these gender stereotypes that generate rejection of women to learn and dedicate themselves to the digital world, being so essential for their future and to protect themselves from online threats.

5. Proposals for bridging the gender and territorial digital divide

1. For all these reasons, one way to reduce the digital divide would be to promote of the study of digital skills, such as the Elements of AI course of the University of Helsinki that we can find on the Ministry's website of Economic Affairs and Digital Transformation, where a Spanish version with an official certificate of achievement that collaborates in its preparation by the UNED, and that can be done for free, as well as the certificate at no cost.¹⁴

2. As is known, in rural areas we find deficient public infrastructure due to lack of budget, due to depopulation, however, people who live in rural areas should not be abandoned, as this situation makes it difficult to carry out studies and online jobs due to poor telecommunications infrastructure. We can use Spain as an example, where we find the National Digital Skills Plan, as well as the Recovery, Transformation and Resilience Plan, where funds allocated by Europe to the Autonomous Regions amount to 11,151 million euros for public policies linked to different areas and highlighting digitalisation with specific budgets for digital vouchers for vulnerable groups and/or for portable devices to reduce the digital divide, among many other measures.¹⁵

3. Obviously, this research recognizes that the digital divide affects both women and men in vulnerable situations, and proposes the course for all people mentioned in the first

¹³ RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII: "Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?" en *Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital*. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

¹⁴ RODRÍGUEZ MARTÍNEZ, P., Capítulo XVIII: "Coste económico de la brecha digital de género en la Unión Europea: 16.100 millones de euros al año. ¿Capricho o necesidad erradicar la brecha digital de género?" en *Desafíos Éticos, Jurídicos y Tecnológicos del avance Digital*. Editorial Iustel, Madrid, 2023. <https://www.iustel.com/editorial/?ficha=1&referencia=90023074>

¹⁵ RODRÍGUEZ MARTÍNEZ, Paloma; "Territorial and gender digital gap.". Congreso. Internacional. "Settle International Conference – Population Imbalances in Europe.". (27/04/2022 - 29/04/2022). <https://iaes.uah.es/es/transferecia-de-conocimiento/otras-actividades-de-transferencia/#settle-conference-posters>

proposal. However, it is essential to make visible the lack of women in the digital sector due to a greater extent to gender stereotypes, and that generates an unequal situation for women with consequences such as the wage gap in the digital sector, the lack of women in the digital sector, among others.

4. On the other hand, it is essential to invest in quality education that does not promote gender stereotypes, educating in digital subjects in such a way that study is attractive for both men and women. Also, investment must be made in sufficient technological infrastructure in rural areas, so that people who live there can telework and study properly. And finally, I am a professor at the University, and I consider the need to educate students for the proper use of artificial intelligence, since I have observed the inappropriate use of the chatgtp tool, where they copy and paste the search result without understanding or read what they copy, and that does not help their training.

5. For all these reasons, to avoid inappropriate use of artificial intelligence tools and networks, a Law must be created that teaches all people to make appropriate use of these tools. In this new Law, we could consider adding subjects at all educational levels that show how to properly use artificial intelligence tools, and thus prevent artificial intelligence from making learning difficult.